



Republic of the Philippines
OFFICE OF THE SECRETARY
Elliptical Road, Diliman
1100 Quezon City

MEMORANDUM ORDER

No. 06
Series of 2021

SUBJECT: GUIDELINES ON THE UNIFIED PROCEDURE FOR THE DETERMINATION AND REPORTING OF ACTUAL SERVICE AREA OF SMALL SCALE IRRIGATION PROJECTS (SSIPs)

I. Rationale

The crop yield for a given cropping season is affected by the actual service area of the irrigation system and thus, a very important economic data requiring acceptable level of precision and accuracy. The actual service area planted and harvested are essential data needed in the efficient planning and delivery of agricultural services to farmers.

This Guidelines is formulated to set a uniform procedure by which the actual service area of Small Scale Irrigation Projects (SSIPs) are determined. It also identifies the concerned agencies that will perform the activities pertaining to the determination, reporting and updating of data on service area. This shall be adopted by the concerned agencies in the implementation of SSIPs.

II. Coverage

This Guidelines shall cover all SSIPs implemented by the Bureau of Soils and Water Management (BSWM), Department of Agriculture-Regional Field Offices (DA-RFOs), and Local Government Units (LGUs) and managed by the Small Water Irrigation System Association (SWISA).

III. Policy Guidelines

Baseline data on the area that can be irrigated is needed as reference before the actual service area is determined. The parcellary map of each SSIP is required to determine the total irrigated area and the individual landholding of each farmer beneficiary that are being served by the system per cropping season. Thus, parcellary mapping for each SSIP shall be the priority activity to be undertaken.

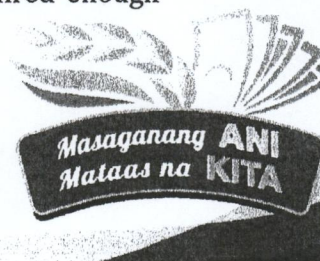
A. Procedure in Parcellary Mapping of the Actual Service Area

1. The boundaries or areal extent of the service area as well as the individual landholding of farmer beneficiary shall be determined through parcellary mapping with the use of global positioning system (GPS) or surveying instrument. This will be done by all members or officers of SWISA, with the assistance of technical staff from BSWM.

If the parcellary mapping will be conducted using a GPS or GPS enabled device, the following shall be observed:

- Initialize the GPS/GPS enabled device and ensure that it has acquired enough satellite and got a fixed position;

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- Initialize the device outdoor in a location that has an unobstructed view of the sky;
- After successful initialization of the GPS, set the device to map view;
- Choose a starting point along the boundary of the farm and let the farm owner or his/her representative occupy that point;
- Set the GPS/mobile phone to start recording the track and let the farmer or his/her representative traverse the boundary of the service area. The starting point will also be the end point of the traverse.
- After finishing the traverse, ensure that the track has been recorded, labeled and saved in the GPS.

On the other hand, if the parcellary mapping will be conducted using a surveying instrument, the following shall be observed:

- Assign the farm owner or his/her representative as the rodman/prism man. Train the farm owner or his/her representative on how to properly use the levelling rod during a survey;
- Establish a benchmark that will serve as a reference for the succeeding stations or points;
- Let the farm owner or his/her representative occupy the corner or inflection points on the boundary of the service area;
- Obtain the reading of the levelling rod at the points occupied by the farmer or his/her representative on the boundary of the service area.
- End the traverse by asking the farmer or his/her representative to occupy the starting point. Obtain the reading of the levelling rod.
- Ensure that all data have been recorded or saved.

* Please note to include the tracks of the headworks/dam, main and lateral canals and other structures

2. Plot the boundaries of parcel per landowner using the track obtained from the GPS or points from the surveying instrument. For further verification and editing, the tracks can be imported to Google Earth in *.kml* file format.
3. Calculate the area of each parcel (Closed polygon) of individual farmer.
4. The edited *.kml* file will be imported to CAD Earth Software to facilitate downloading/plotting of the individual parcel following the format to be provided by BSWM.
5. The Parcellary map shall contain the following information:
 - The name and location of the project
 - Location of the headworks/dam relative to the service area;
 - Location and type of the main and lateral canals;
 - Area of individual parcels (hectares);
 - Name of landowner or tenant per parcel;
 - The date/season the Parcellary mapping was conducted;
 - The orientation (northing) and the scale of the parcellary map; and
 - The legend of the map

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IV. Execution

A. Implementing Agencies

The BSWM shall lead the implementation of the procedures for the determination and reporting of actual service area of SSIPs particularly SWIP and DD.

Roles and responsibilities of the parties

The BSWM shall:

1. Capacitate the SWISA members or officers and ensure the competence in the determination of the boundaries or areal extent of the service area and the individual landholding of farmer beneficiaries;
2. Supervise the initial conduct of parcellary mapping using a GPS or surveying instrument;
3. Provide the final and approved parcellary map of the service area to the SWISA;
4. Receive reports on the actual area planted and harvested every cropping season from the SWISAs for planning purposes; and
5. Continually capacitate the SWISAs by incorporating in their training module for BLST and TST the procedures in the determination, updating and reporting of their actual service area.

The SWISA shall:

1. Conduct parcellary mapping of their service area boundary or areal extent as well as the individual landholding of each farmer beneficiary with the supervision of BSWM staff;
2. Display the approved parcellary map in the SWISA Office as reference in the water distribution scheme, collection of operation and maintenance fee, membership fee, and in the determination of actual service area of the system per cropping season;
3. Assign an officer or member who will determine the actual service area planted and harvested every cropping season;
4. Maintain a record of the total actual service area per season and per farmer;
5. Report the actual service area planted and harvested every cropping season to the LGU, DA-RFO and BSWM; and
6. Conduct updating of the parcellary map if there are physical changes (reduction or expansion) in the service area.

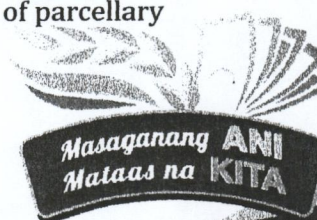
The LGU shall:

1. Provide the necessary assistance to the SWISA during the conduct of parcellary mapping; and
2. Use the reports on the actual service area planted and harvested during the cropping season on their planning and other intervention activities to SWISA.

The DA-RFO shall:

1. Provide the necessary support and assistance to SWISA during the conduct of parcellary mapping;

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6. The approved parcellary map shall be displayed in the SWISA Office as reference in the water distribution scheme, collection of operation and maintenance fee, membership fee, and in the determination of actual service area of the system per cropping season.

B. Procedure in the Determination of Actual Service Area (wet and dry season)

The BSWM through the assigned Community Development Officer (CDO) and Engineer in the Region shall capacitate the assigned SWISA member on the procedure and shall ensure the competence of the SWISA to handle the activities.

1. The parcellary maps shall be the basis in the determining the actual service area for a particular cropping season.
2. The determination of current service area for wet and dry season or updating of the service area shall be done one (1) month after planting and one (1) week before harvesting to ensure that the reported service area is the actual area planted and harvested for the cropping season. Areas that have been planted with short duration crops shall also be included in the accounting of the total area planted and harvested. In the example shown in the table below, the total area planted is 6 hectares while the total area harvested is 5.25 hectares.

| Name of Farmer | Service Area, ha | | | Crops/Cropping Season |
|----------------|------------------|-----------|--------------|--------------------------------|
| | Mapped* | Planted** | Harvested*** | |
| Farmer 1 | 6 | 5 | 4.5 | Rice, Wet (May-August, 2020) |
| | | 1 | 0.75 | Eggplant, Wet (May-June, 2020) |

*based on parcellary map; **1 month after planting; ***1 week before harvesting.

3. The SWISA shall assign an officer or member who will determine the area planted and harvested with reference to the parcellary map. The determined service area shall be reported to LGU, DA-RFO and BSWM.
4. If there are physical changes (reduction or expansion) in the service area with respect to the parcellary map, the SWISA, with the assistance of BSWM or DA-RFO staff, shall conduct updating of the map.

C. Capacity Enhancement for SWISA

To ensure compliance of SWISA to this Guidelines, the procedure in the determination of actual service area of the system will be integrated in their training module for Basic Leadership Skills Training (BLST) and Technical Skills Training (TST). All SWISAs will be continually trained on how to conduct parcellary mapping, monitoring of the service area and utilization of data in the operation of the association.

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2. Use the reports on the actual service area planted and harvested during the cropping season on their planning and other intervention activities to SWISA; and
3. Assist the SWISA in the updating of the parcellary map if there are physical changes (reduction or expansion) in the service area.

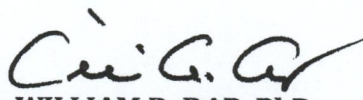
V. Resolution of Issues and Concerns Regarding the Guidelines

All issues and concerns pertaining to this Guidelines shall be forwarded to the Office of the BSWM Director for appropriate and immediate action.

VI. Effectivity

This Guidelines shall take effect immediately.

Done this 11th day of January 2021.


WILLIAM D. DAR, PhD.
Secretary ^{or}
Department of Agriculture

DEPARTMENT OF AGRICULTURE

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